

<b>AWARD/CONTRACT</b>		<b>1. This Contract Is A Rated Order Under DPAS (15 CFR 700)</b>		<b>Rating</b> DOA4		<b>Page</b> 1 <b>Of</b> 21	
<b>2. Contract (Proc. Inst. Ident) No.</b> W56HZV-04-C-0091		<b>3. Effective Date</b> 2004JAN09		<b>4. Requisition/Purchase Request/Project No.</b> SEE SCHEDULE			
<b>5. Issued By</b> TACOM WARREN BLDG 231 AMSTA-AQ-ABGA KATHY LAMBERT (586)574-7634 WARREN, MICHIGAN 48397-5000  HTTP://CONTRACTING.TACOM.ARMY.MIL  <b>e-mail address:</b> LAMBERTK@TACOM.ARMY.MIL		<b>Code</b> W56HZV	<b>6. Administered By (If Other Than Item 5)</b> DCMA DALLAS 1200 MAIN ST DALLAS, TX 75202-4399  <b>SCD</b> A <b>PAS</b> NONE <b>ADP</b> PT HQ0339		<b>Code</b> S4402A		
<b>7. Name And Address Of Contractor (No. Street, City, County, State, And Zip Code)</b> KRYONYX, INC. P. O. BOX 261237 PLANO, TX. 75026-1237  TYPE BUSINESS: Other Small Business Performing in U.S.				<b>8. Delivery</b> <input type="checkbox"/> FOB Origin <input checked="" type="checkbox"/> Other (See Below) SEE SCHEDULE			
				<b>9. Discount For Prompt Payment</b>			
				<b>10. Submit Invoices (4 Copies Unless Otherwise Specified)</b>		<b>Item</b> 12	
<b>Code</b> 3LNZ8 <b>Facility Code</b>				<b>To The Address Shown In:</b>			
<b>11. Ship To/Mark For</b> SEE SCHEDULE		<b>Code</b>	<b>12. Payment Will Be Made By</b> DFAS - COLUMBUS CENTER DFAS-CO/WEST ENTITLEMENT OPERATIONS P.O. BOX 182381 COLUMBUS, OH 43218-2381		<b>Code</b> HQ0339		
<b>13. Authority For Using Other Than Full And Open Competition:</b> <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 41 U.S.C. 253(c)( )			<b>14. Accounting And Appropriation Data</b> ACRN: AA 21 42040000046N6N7EP665502255Y S20113 W56HZV				
<b>15A. Item No.</b> SEE SCHEDULE	<b>15B. Schedule Of Supplies/Services</b> CONTRACT TYPE: Firm-Fixed-Price	<b>15C. Quantity</b>	<b>15D. Unit</b>	<b>15E. Unit Price</b>	<b>15F. Amount</b>		
		KIND OF CONTRACT: Research and Development Contracts					
<b>15G. Total Amount Of Contract</b>						\$70,000.00	
<b>16. Table Of Contents</b>							
(X)	Section	Description	Page(s)	(X)	Section	Description	Page(s)
Part I - The Schedule				Part II - Contract Clauses			
X	A	Solicitation/Contract Form	1	X	I	Contract Clauses	16
X	B	Supplies or Services and Prices/Costs	2	Part III - List Of Documents, Exhibits, And Other Attachments			
X	C	Description/Specs./Work Statement	6	X	J	List of Attachments	21
X	D	Packaging and Marking	9	Part IV - Representations And Instructions			
X	E	Inspection and Acceptance	10		K	Representations, Certifications, and Other Statements of Offerors	
X	F	Deliveries or Performance	11				
X	G	Contract Administration Data	12		L	Instrs., Conds., and Notices to Offerors	
X	H	Special Contract Requirements	14		M	Evaluation Factors for Award	
Contracting Officer Will Complete Item 17 Or 18 As Applicable							
<b>17.</b> <input checked="" type="checkbox"/> Contractor's Negotiated Agreement (Contractor is required to sign this document and return 2 signed copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)				<b>18.</b> <input type="checkbox"/> Award (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.			
<b>19A. Name And Title Of Signer (Type Or Print)</b>				<b>20A. Name Of Contracting Officer</b> DEREK MCALEER MCALEERD@TACOM.ARMY.MIL (586)574-7197			
<b>19B. Name of Contractor</b>  By _____ (Signature of person authorized to sign)		<b>19c. Date Signed</b>		<b>20B. United States Of America</b>  By _____ /SIGNED/ (Signature of Contracting Officer)		<b>20C. Date Signed</b> 2004JAN09	

Name of Offeror or Contractor: KRYONYX, INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS  <u>SERVICES LINE ITEM</u>  SECURITY CLASS: Unclassified  Contractor shall furnish all the supplies and services to accomplish the effort specified in paragraphs C.1 through C.3 of the Contract  (End of narrative B001)				
0001AA	<u>SERVICES LINE ITEM</u>  NOUN: FY04 NEW PHI SBIR KRYONYX PRON: E142C063EH PRON AMD: 01 ACRN: AA AMS CD: 665502M4055  NOUN: Supplies/Services in support of 1st Interim Report (A001) (See B.1)  (End of narrative B001)  NOUN: Supplies/Services in support of 2nd Interim Report (A001) (See B.1)  (End of narrative B002)  <u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination  <u>Deliveries or Performance</u> DLVR SCH PERF COMPL <u>REL CD</u> <u>QUANTITY</u> <u>DATE</u> 001 0 SEE SECTION F  \$ 23,333.00				\$ 23,333.00

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Name of Offeror or Contractor: KRYONYX, INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AB	<p><u>SERVICES LINE ITEM</u></p> <p>NOUN: FY04 NEW PHI SBIR KRYONYX PRON: E142C063EH PRON AMD: 01 ACRN: AA AMS CD: 665502M4055</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u> DLVR SCH PERF COMPL <u>REL CD</u> <u>QUANTITY</u> <u>DATE</u> 001 0 SEE SECTION F</p> <p>\$ 23,333.00</p>				\$ 23,333.00
0001AC	<p><u>SERVICES LINE ITEM</u></p> <p>NOUN: FY04 NEW PHI SBIR KRYONYX PRON: E142C063EH PRON AMD: 01 ACRN: AA AMS CD: 665502M4055</p> <p>NOUN: Supplies/Services in support of 3rd Interim Report (A001) (See B.1)</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u> DLVR SCH PERF COMPL <u>REL CD</u> <u>QUANTITY</u> <u>DATE</u> 001 0 SEE SECTION F</p> <p>\$ 23,334.00</p>				\$ 23,334.00

Name of Offeror or Contractor: KRYONYX, INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	<div>DATA ITEM</div> <div>SECURITY CLASS: Unclassified</div> <div>Technical Data as set forth in Contract Data Requirements List (DD Form 1423) hereinafter referred to as Exhibit A</div> <div>(End of narrative B001)</div> <div>Packaging and Marking</div>				

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b> <b>PIIN/SIIN</b> W56HZV-04-C-0091 <b>MOD/AMD</b>	<b>Page</b> 5 <b>of</b> 21
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B.1       The payments under this contract are to be in accordance with the subCLINs. SubCLINs 0001AA, 0001AB, and 0001AC are set up to pay the Contractor at the 2nd, 4th and 6th month, respectively, after contract award. If Option CLIN 0003 is exercised (ref. H.1) CLIN 0003 and SubCLINs 0003AA and 0003AB will be established to pay the Contractor, in two equal payments of \$25,000.00, at the 2nd and 4th month after exercise of the option effort. All payments are contingent upon TACOM receiving and approving a DD Form 250 (reference provision H-12 of the contract) for the report/addendum designated in each subCLIN. The contractor shall then submit the approved DD Form 250 to the payment office indicated in Block 12 on the face page of the contract in order to receive payment.

\*\*\* END OF NARRATIVE B 001 \*\*\*

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b> <b>PIIN/SIIN</b> W56HZV-04-C-0091 <b>MOD/AMD</b>	<b>Page</b> 6 <b>of</b> 21
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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 SCOPE OF WORK

C.1.1 The contractor, acting as an independent contractor and not as an agent of the Government, shall provide the necessary personnel, facilities, materials and services to complete the scope of work. The scope of work is based on the contractor's proposal dated 12 August 03, Small Business Innovation Research Program (SBIR) A032-2720, Topic Number A03-225, entitled "Modeling of Nanostructures".

C.1.2 Task 1: Analysis of the mathematical limitations of Einsteins relativity theory and its impact on nanotechnology.

C.1.2.1 Task 1a: Derivation of the Riemann curvature tensor and proof that it exists on a space-continuum supporting a path-independent tangent space.

C.1.2.2 Task 1b: Derivation of the equation for a metrical geodesic on a space-continuum with a Christoffel connection between points.

C.1.2.3 Task 1c: Derivation of the universal tensor on an affine manifold with a path-dependent tangent space supporting discrete line-continua.

C.1.2.4 Task 1d: Proof that Einstein limited an affine geodesic so as to force its equation to be the same as that of a metrical geodesic.

C.1.2.5 Task 1e: Proof that Einsteins geodesic on an affine spatiotemporal manifold precludes curved geodesics in the flat spacetime of nanotechnology.

C.1.2.6 Task 1f: Proof that Einsteins geodesic cannot support a path-independent transport of the covariant momentum vector field of Diracs wave equation.

C.1.3 Task 2: Mathematical development of a six-dimensional hyperspacetime capable of unifying Einsteins general relativity with Diracs quantum relativity.

C.1.3.1 Task 2a: Mathematical decomposition of the universal tensor on an affine manifold into curvature and torsion tensors with different connections.

C.1.3.2 Task 2b: Topological representation of the curvature tensor by a dilating sphere in a torsion-free timelike spacetime comprising a space-continuum.

C.1.3.3 Task 2c: Topological representation of the torsion tensor by an osculating plane in a curvature-free spacelike spacetime tangent to timelike spacetime.

C.1.3.4 Task 2d: Topological union of torsion-free timelike spacetime and curvature-free spacelike spacetime in a six-dimensional hyperspacetime.

C.1.2.5 Task 2e: Mathematically represent a point on an affine manifold by a Frenet frame field relative to the frame fields of line-continua in a space-continuum.

C.1.4 Task 3: Dynamical derivation of a solution to the Dirac wave equation in a form compatible with the Schrdinger wave equation and its impact on nanotechnology.

C.1.4.1 Task 3a: Mathematically represent Diracs relativistic Hamiltonian in a Frenet frame field moving along an affine geodesic in six-dimensional hyperspacetime.

C.1.4.2 Task 3b: Mathematically derive the Hamiltonian describing the dynamic motion of a spacelike frame field in four-dimensional timelike spacetime.

C.1.4.3 Task 3c: Mathematically derive the Hamiltonian describing the dynamic motion of a Frenet frame field in three-dimensional spacelike spacetime.

C.1.4.4 Task 3d: Mathematically combine the three Hamiltonians so as to describe the dynamic motion of a spinning electron in a central force field.

C.1.4.5 Task 3e: Mathematically establish the half-integer-quantized eigenstates resulting from a subquantization of whole-integer-quantized eigenstates.

C.1.5 Task 4: Culmination of Activities.

C.1.5.1 Task 4a: Einsteins general relativity is reconciled with Diracs quantum relativity such that spin is established as an angular momentum vector field along an affine geodesic.

C.1.5.2 Task 4b: Atomic stability is established as due to an inertia balance between photon emission in timelike spacetime and phonon generation in spacelike spacetime.

C.1.5.3 Task 4c: Prepare and submit the final report on the physical basis of a spinning electron.

C.2 Deliverables

C.2.1 The contractor shall submit two Interim Technical Reports and a Final Technical Report in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423-1).

C.2.1.1 Interim Technical Reports

C.2.1.1.1 Each Interim Technical Report shall be in contractor format and shall address the technical information and cover all of the work performed to date against the Scope of Work.

C.2.1.1.2 Additionally each Interim Technical Report shall include:

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Name of Offeror or Contractor: KRYONYX, INC.

C.2.1.1.2.1 At the beginning of the report...the contractor's name and address, the contract number, the nomenclature of the program, the date of the report, the period covered by the report, the title of the report, the security classification, and the name of the issuing Government activity;

C.2.1.1.2.2 Description of the progress made against milestones during the reporting period;

C.2.1.1.2.3 Results, positive or negative, obtained related to previously identified problem areas, with conclusions and recommendations;

C.2.1.1.2.4 Any significant changes to the contractor's organization or method of operation or to the planned technical milestone schedule;

C.2.1.1.2.5 Problem areas affecting technical or scheduling elements, with background and any recommendations for solutions beyond the scope of the contract;

C.2.1.1.2.6 Contract schedule status;

C.2.1.1.2.7 Plans for activities during the following reporting period;

C.2.1.1.2.8 Name and telephone number of preparer of report;

C.2.1.1.2.9 Appendixes for any necessary tables, references, photographs, illustrations, and charts.

C.2.1.1.3 Information contained in the first Interim Technical Report shall not be duplicated in the second Interim Technical Report unless duplication is required to clearly document an effort that overlaps the time frame of each report.

C.2.1.2 Final Technical Report

C.2.2 The contractor shall prepare and submit a final technical report in contractor format addressing all of the work performed against the Scope of Work (reference C.1.1) during the contract in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423-1).

C.3 Meetings

C.3.1 The contractor shall plan and conduct a one-day Start of Work meeting. The Start of Work meeting shall be held no later than one month after date of contract award or as mutually agreeable with the Contracting Officer's Representative (COR). The contractor shall explain his intended approach for accomplishing the scope of work.

C.4 CLIN 0003 Option Effort

C.4.1 If exercised, the contractor shall complete the option scope of work. The option scope of work is based on of the contractor's proposal, dated 12 August 03 (incorporated by reference), for the Small Business Innovation Research Program (SBIR) A032-2720, Topic Number A03-225 entitled "Modeling of Nanostructures".

C.4.2 Option Task: Analysis of the direct transformation between latent heat energy and matter in an electrochemical reaction and its impact on the National Energy Policy.

C.4.2.1 Option Subtask 1: Establish the physical conditions for secondary quantization in nanotechnology such that, for example, 2p orbitals separate into 2p<sub>3/2</sub> and 2p<sub>1/2</sub> orbitals.

C.4.2.2 Option Subtask 2: Establish the prioritized filling of the higher-energy half-integer eigenstates such that, for example, 2p<sub>3/2</sub> orbitals are filled before 2p<sub>1/2</sub> orbitals.

C.4.2.3 Option Subtask 3: Establish the existence of nanoscale forces (that are nonexistent in microtechnology) due to the reverse-filling of half-integer eigenstates.

C.4.2.4 Option Subtask 4: Introduce a heretofore unknown phonoelectric effect that complements the Seebeck effect so as to generate electricity from an uncompensated increase in entropy by exploiting the reverse-filling of half-integer eigenstates.

C.4.2.5 Option Subtask 5: Introduce a novel nanoenergy device in which electricity is generated directly from atmospheric heat, without a fuel, by the phonoelectric effect.

C.4.2.6 Option Subtask 6: Establish milestones for the fabrication of nanoenergy prototypes in a Phase II project that exploits nanoscale forces to replace a hydrogen fuel cell.

C.4.2.7 Option Subtask 7: Prepare and submit an addendum to the final technical report at two months and four months that establishes the impact of nanoenergy on the National Energy Policy.

C.5 Deliverables - CLIN 0003

C.5.1 Technical Report Addendum (Interim and Final). The contractor shall submit an interim Addendum to the Final Technical

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Report and an Addendum to the Final Technical Report in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423-1). The Addendum shall be in contractor format and shall address the technical information/results of all of the work performed against the CLIN 0003 option effort.

\*\*\* END OF NARRATIVE C 001 \*\*\*



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SECTION D - PACKAGING AND MARKING

PACKAGING AND MARKING

D.1 Packaging and Packing

All items deliverable under this contract shall be packaged and packed in accordance with standard commercial practice in order to assure arrival at Destination without damage or loss.

D.2 Marking

All technical data deliverable under this contract shall be identified by the prime contractor, the name and address of the prime contractor, and where applicable, the name and address of the subcontractor who generated the data.

\*\*\* END OF NARRATIVE D 001 \*\*\*

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SECTION E - INSPECTION AND ACCEPTANCE

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
E-1	52.246-9	INSPECTION OF RESEARCH AND DEVELOPMENT (SHORT FORM)	APR/1984

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SECTION F - DELIVERIES OR PERFORMANCE

	Regulatory Cite	Title	Date
F-1	52.242-15	STOP-WORK ORDER	AUG/1989
F-2	52.242-17	GOVERNMENT DELAY OF WORK	APR/1984
F-3	52.247-34	F.O.B. DESTINATION	NOV/1991

DELIVERIES OR PERFORMANCE

- F.1 Delivery
- F.1.1 All items other than data (if any) called for in the Contract shall be delivered FOB Destination to:
- U.S. Tank-Automotive and Armaments Command
- ATTN: AMRSD-TAR-N/M.S. 272, Greg Hudas
- 6501 E. 11 Mile Rd.
- Warren, Michigan 48397-5000
- F.1.2 Delivery of Data set forth in the Contract shall be in accordance with the Contract Data Requirements List, DD Form 1423.
- F.2 Performance - CLINs 0001 and 0002
- F.2.1 The period of performance shall be six (6) months from date of award, including submission of final technical report.
- F.2.2 The Contractor shall submit the Draft Technical Report five (5) months and one (1) week after contract award. The Government will review the draft technical report and return it to the Contractor within seven (7) days of receipt. The Contractor shall submit the Final Technical Report within fourteen (14) days after receipt of draft comments/approval. Acceptance of final report will constitute completion.
- F.3 Performance - CLIN 0003
- F.3.1 The period of performance shall be four (4) months from date of option exercise, including submission of the Addendum to the Final Technical Report.
- F.3.2 The Contractor shall submit the Draft Addendum to the Final Technical Report three (3) months and one week after the date of the CLIN 0003 option exercise. The Government will review the draft addendum and return it to the Contractor within seven (7) days of receipt. The Contractor shall submit the final addendum within fourteen (14) days after receipt of draft comments/approval. Acceptance of final addendum will constitute completion.

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SECTION G - CONTRACT ADMINISTRATION DATA

LINE	PRON/ AMS CD/ ITEM MIPR	OBLG ACRN STAT	ACCOUNTING CLASSIFICATION	JOB ORDER NUMBER	ACCOUNTING STATION	OBLIGATED AMOUNT
0001AA	E142C063EH 665502M4055	AA 1 21	42040000046N6N7EP665502255Y S20113	42C063	W56HZV \$	23,333.00
0001AB	E142C063EH 665502M4055	AA 1 21	42040000046N6N7EP665502255Y S20113	42C063	W56HZV \$	23,333.00
0001AC	E142C063EH 665502M4055	AA 2 21	42040000046N6N7EP665502255Y S20113	42C063	W56HZV \$	23,334.00
						70,000.00
						70,000.00

SERVICE NAME	TOTAL BY ACRN	ACCOUNTING CLASSIFICATION	ACCOUNTING STATION	OBLIGATED AMOUNT
Army	AA	21 42040000046N6N7EP665502255Y S20113	W56HZV	70,000.00
				70,000.00

Regulatory Cite	Title	Date
G-1	52.242-4016 (TACOM) COMMUNICATIONS	MAY/2000

(a) Communications on technical matters pertaining to the contract shall be direct between the contractor and the Technical Representative. Communications for the Technical Representative shall be addressed to:

Name: Dr. Greg Hudas, AMSRD-TAR-N  
e-mail: hudasg@tacom.army.mil

(b) The Administrative Contracting Officer's (ACO) name and email address are also provided if known at this time:

ACO: Linda Mitchell, (214) 573-2111  
e-mail: linda.mitchell@dcma.mil

(c) Please see the appointment letters prepared at time of contract award for functions the Technical Representative and ACO will perform on this contract.

[End of Clause]

G-2	252.201-7000	CONTRACTING OFFICER'S REPRESENTATIVE	DEC/1991
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(a) Definition. Contracting Officer's Representative means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

[End of Clause]

G-3	52.227-4004 (TACOM)	RELEASE OF INFORMATION	OCT/2003
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The contractor shall ensure that he complies with the requirements of Chapter 5, page 22, paragraph 5-48, of AR 360-1, The Army Public Affairs Program, dated 15 Oct 2000, prior to contemplated release of any procurement information. Approval of the Contracting Officer is required prior to release of any such information. AR 360-1 may be found at

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[http://www.usapa.army.mil/pdffiles/r360\\_1.pdf](http://www.usapa.army.mil/pdffiles/r360_1.pdf) .

[End of clause]  
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SECTION H - SPECIAL CONTRACT REQUIREMENTS

	Regulatory Cite	Title	Date
H-1	252.204-7000	DISCLOSURE OF INFORMATION	DEC/1991
H-2	252.204-7002	PAYMENT FOR SUBLINE ITEMS NOT SEPARATELY PRICED	DEC/1991
H-3	252.225-7002	QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS	APR/2003
H-4	252.227-7036	DECLARATION OF TECHNICAL DATA CONFORMITY	JAN/1997
H-5	252.227-7037	VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA	SEP/1999
H-6	252.231-7000	SUPPLEMENTAL COST PRINCIPLES	DEC/1991
H-7	252.235-7011	FINAL SCIENTIFIC OR TECHNICAL REPORT	SEP/1999
H-8	252.246-7000	MATERIAL INSPECTION AND RECEIVING REPORT	MAR/2003
H-9	252.246-7001	WARRANTY OF DATA	DEC/1991
H-10	252.227-7039	PATENTS -- REPORTING OF SUBJECT INVENTIONS	APR/1990

The Contractor shall furnish the Contracting Officer the following:

(a) Interim reports every twelve (12) months (or such longer period as may be specified by the Contracting Officer) from the date of the contract, listing subject inventions during that period and stating that all subject inventions have been disclosed or that there are no such inventions.

(b) A final report, within three (3) months after completion of the contracted work, listing all subject inventions or stating that there were no such inventions.

(c) Upon request, the filing date, serial number and title, a copy of the patent application and patent number, and issue data for any subject invention for which the Contractor has retained title.

(d) Upon request, the Contractor shall furnish the Government an irrevocable power to inspect and make copies of the patent application file.

(End of clause)

H-11	52.204-4005 (TACOM)	REQUIRED USE OF ELECTRONIC CONTRACTING	DEC/2002
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(a) All contract awards, modifications and delivery orders issued by TACOM will be issued electronically. The contractor has the option to receive these actions either via the Worldwide Web (WWW) or Electronic Data Interchange (EDI). Many provisions and clauses appear "by reference," meaning only clause titles and regulation site are listed; their full texts can be found at the website <http://farsite.hill.af.mil/>

(b) In order to be eligible to receive an award under this solicitation, the successful offeror must be registered with the Department of Defense (DOD) Central Contractor Registration (CCR). The CCR registration process may be done electronically at the World Wide Web (WWW) site: <http://www.ccr.gov/>. (In order to be registered to use EDI, you must use the long form for registration. Certification information, including information on the EDI 838 TPP, must be furnished to the Contracting Officer within 60 calendar days after contract award to complete networking requirements within the Government.)

(c) Worldwide Web Distribution. The contractor will receive an electronic Notice of the Award, Modification, or Delivery Order via e-mail. If you choose the WWW option, you must download the file from the appropriate TACOM webpage:

Warren: [http://contracting.tacom.army.mil/awards\\_official.htm](http://contracting.tacom.army.mil/awards_official.htm)  
Rock Island: <http://aaais.ria.army.mil/AAIS/AWDINFO/index.htm>  
Picatinny: <http://procnet.pica.army.mil/Contracts/Index.htm>  
Red River Army Depot: <http://www.redriver.army.mil/contracting/Awards>  
Anniston Army Depot: <http://www.anadprocnet.army.mil>

(d) Electronic Data Interchange. If you choose to receive contract awards, modifications and delivery orders through EDI, they will be delivered electronically via the Federal Acquisition Network (FACNET). Federal Standard Version 3050 of Standard X12 from the American National Standards Institute (ANSI) will be used as the format for these electronic transactions.

(1) You must complete the EDI 838 Trading Partner Profile, and must agree (i) to subcontract with a DoD certified VAN or Value Added Service (VAS) provider, or (ii) to become DoD certified as a Value Added Network (VAN). The EDI 838 Training Partner Profile is contained in the basic CCR registration form and includes portions of the registration form which are titled "Optional".

(2) You must select a VAN from the official DoD approved list. DoD Certified VANs are listed at <http://www.acq.osd.mil/ec/ecip/index.htm>. If your VAN is later removed from the official list, or if you voluntarily drop your

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**Name of Offeror or Contractor:** KRYONYX, INC.

initially selected VAN, then you must switch to a VAN that remains on the official DoD approved list. You must maintain an active account on a DoD approved VAN for the entire duration of the contract, beginning no later than the 60th day after award.

(e) Unless otherwise specified elsewhere in the contract, all data items you are required to provide under this contract must be submitted electronically. Acceptable formats include:

- (1) Microsoft\* 97 Office Products (TACOM can currently read OFFICE 97\* and lower.): Word, Excel, Powerpoint, or Access
- (2) 100 OR 250 MEGABYTE ZIP\*-DISK, 3 1/2 INCH DISK, OR 650 MEGABYTE CD ROM
- (3) E-MAIL (Maximum size of each e-mail message is be three and one-half (3.5) megabytes).

(4) Other electronic formats. Before submitting your data in any other electronic format, please e-mail the buyer identified on the face of the contract, with e-mail copy-furnished to amsta-idg@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the buyer not later than ten calendar days before the required data submission date.

NOTE: The above formats may be submitted in compressed form using self-extracting files.

(f) Additional information can be obtained by sending a message to: acqcenweb@tacom.army.mil or by calling (586) 574-7059.  
[End of Clause]

H-12	52.246-4026	LOCAL ADDRESSES FOR DD FORM 250	MAR/2002
	(TACOM)		

(a) The contractor must provide a copy of each Material Inspection and Receiving Report (DD 250) pertaining to this contract, to the addresses given below, using either of the following methods:

- (1) Our first preference is for you to use electronic mail (e-mail), using the following e-mail address:  
  
DD250@tacom.army.mil
- (2) Our second preference is for you to use data facsimile (datafax) transmission, using this fax number:  
  
(586) 574-7552 and use "DD250 mailbox" in the "to:" block of your fax cover or header sheet.

In either method, do not mix DD250s from more than one contract in a single transmmission. That is, you may submit multiple DD250s in a single transmission, but they must all be against the same contract.

(b) These copies meet the requirements for the Purchasing Office copy and the Army Inventory Control Manager copy listed in tables 1 and 2 of DFARS Appendix F.

(c) The DD250 form may be found, in three different formats, on the World Wide Web at <http://web1.whs.osd.mil/icdhome/DD-0999.htm>  
[End of Clause]

SPECIAL PROVISIONS

H.1      Option CLIN 0003

H.1.1      The Government shall have the unilateral right to exercise an option for the effort described in C.4. The Government may exercise this option at any time after contract award but no later than nine (9) months after contract award. If exercised, the option effort will be awarded on a firm fixed price basis for \$50,000.00. The period of performance of the option effort will be during the four (4) months following the date of option exercise.

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Name of Offeror or Contractor: KRYONYX, INC.		

SECTION I - CONTRACT CLAUSES

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: <http://farsite.hill.af.mil/>

[End of Clause]

	Regulatory Cite	Title	Date
I-1	52.202-1	DEFINITIONS	DEC/2001
I-2	52.203-3	GRATUITIES	APR/1984
I-3	52.203-5	COVENANT AGAINST CONTINGENT FEES	APR/1984
I-4	52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	JUL/1995
I-5	52.203-7	ANTI-KICKBACK PROCEDURES	JUL/1995
I-6	52.203-8	CANCELLATION, RESCISSION AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-7	52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-8	52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	JUN/2003
I-9	52.204-4	PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER	AUG/2000
I-10	52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	JUL/1995
I-11	52.211-15	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS	SEP/1990
I-12	52.215-2	AUDIT AND RECORDS - NEGOTIATIONS	JUN/1999
I-13	52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT	OCT/1997
I-14	52.215-11	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA--MODIFICATIONS	OCT/1997
I-15	52.215-13	SUBCONTRACTOR COST OR PRICING DATA -- MODIFICATIONS	OCT/1997
I-16	52.215-14	INTEGRITY OF UNIT PRICES (ALTERNATE I, (OCT 1997))	OCT/1997
I-17	52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS	OCT/2000
I-18	52.219-14	LIMITATIONS ON SUBCONTRACTING	DEC/1996
I-19	52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES	FEB/1997
I-20	52.222-21	PROHIBITION OF SEGREGATED FACILITIES	FEB/1999
I-21	52.222-26	EQUAL OPPORTUNITY	APR/2002
I-22	52.222-35	AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA	DEC/2001
I-23	52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES	JUN/1998
I-24	52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS	DEC/2001
I-25	52.223-6	DRUG FREE WORKPLACE	MAY/2001
I-26	52.223-14	TOXIC CHEMICAL RELEASE REPORTING	AUG/2003
I-27	52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	JUN/2003
I-28	52.227-1	AUTHORIZATION AND CONSENT (ALTERNATE I dated April 1984)	JUL/1995
I-29	52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	AUG/1996
I-30	52.227-11	PATENT RIGHTS--RETENTION BY THE CONTRACTOR (SHORT FORM)	JUN/1997
I-31	52.229-3	FEDERAL, STATE, AND LOCAL TAXES	APR/2003
I-32	52.232-2	PAYMENTS UNDER FIXED-PRICE RESEARCH AND DEVELOPMENT CONTRACTS	APR/1984
I-33	52.232-8	DISCOUNTS FOR PROMPT PAYMENT	FEB/2002
I-34	52.232-9	LIMITATION ON WITHHOLDING OF PAYMENTS	APR/1984
I-35	52.232-11	EXTRAS	APR/1984
I-36	52.232-17	INTEREST	JUN/1996
I-37	52.232-23	ASSIGNMENT OF CLAIMS	JAN/1986
I-38	52.232-25	PROMPT PAYMENT	FEB/2002
I-39	52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER--CENTRAL CONTRACTOR REGISTRATION	OCT/2003
I-40	52.233-1	DISPUTES	JUL/2002
I-41	52.233-3	PROTEST AFTER AWARD	AUG/1996
I-42	52.242-13	BANKRUPTCY	JUL/1995
I-43	52.243-1	CHANGES--FIXED-PRICE (ALTERNATE V (APR 1984))	AUG/1987
I-44	52.244-5	COMPETITION IN SUBCONTRACTING	DEC/1996
I-45	52.246-23	LIMITATION OF LIABILITY	FEB/1997
I-46	52.249-2	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE)	SEP/1996
I-47	52.249-9	DEFAULT (FIXED-PRICE RESEARCH AND DEVELOPMENT)	APR/1984
I-48	52.253-1	COMPUTER GENERATED FORMS	JAN/1991
I-49	252.203-7001	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE CONTRACT-RELATED FELONIES	MAR/1999
I-50	252.204-7003	CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT	APR/1992



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	Regulatory Cite	Title	Date
I-51	252.209-7000	ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ON-SITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY	NOV/1995
I-52	252.209-7004	SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY per DoD interim rule, Federal Register 27 Mar 98	MAR/1998
I-53	252.215-7000	PRICING ADJUSTMENTS	DEC/1991
I-54	252.225-7012	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES	FEB/2003
I-55	252.225-7031	SECONDARY ARAB BOYCOTT OF ISRAEL	APR/2003
I-56	252.227-7016	RIGHTS IN BID OR PROPOSAL INFORMATION	JUN/1995
I-57	252.227-7017	IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS	JUN/1995
I-58	252.227-7018	RIGHTS IN NONCOMMERCIAL TECHNICAL DATA AND COMPUTER SOFTWARE-- SMALL BUSINESS INNOVATIVE RESEARCH (SBIR) PROGRAM	JUN/1995
I-59	252.227-7019	VALIDATION OF ASSERTED RESTRICTIONS--COMPUTER SOFTWARE	JUN/1995
I-60	252.227-7030	TECHNICAL DATA--WITHHOLDING OF PAYMENT	MAR/2000
I-61	252.227-7034	PATENTS--SUBCONTRACTS	APR/1984
I-62	252.242-7000	POSTAWARD CONFERENCE	DEC/1991
I-63	252.243-7001	PRICING OF CONTRACT MODIFICATIONS	DEC/1991
I-64	252.243-7002	REQUESTS FOR EQUITABLE ADJUSTMENT	MAR/1998
I-65	252.244-7000	SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DoD CONTRACTS)	MAR/2000
I-66	52.252-6	AUTHORIZED DEVIATIONS IN CLAUSES	APR/1984

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the date of the clause.

(b) The use in this solicitation or contract of any DoD FAR Supplement (DFARS) (48 CFR 2) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the name of the regulation.

[End of Clause]

I-67	252.204-7004	REQUIRED CENTRAL CONTRACTOR REGISTRATION	NOV/2001
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(a) Definitions. As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)

(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

<p style="text-align: center;"><b>CONTINUATION SHEET</b></p>	<p style="text-align: center;"><b>Reference No. of Document Being Continued</b></p> <p style="text-align: center;">PIIN/SIIN W56HZV-04-C-0091      MOD/AMD</p>	<p style="text-align: center;"><b>Page 18 of 21</b></p>
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**Name of Offeror or Contractor:** KRYONYX, INC.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr.gov>.

[End of Clause]

I-68	252.247-7023	TRANSPORTATION OF SUPPLIES BY SEA	MAY/2002
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- (a) Definitions. As used in this clause--
- (1) Components means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.
  - (2) Department of Defense (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.
  - (3) Foreign flag vessel means any vessel that is not a U.S.-flag vessel.
  - (4) Ocean transportation means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.
  - (5) Subcontractor means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract. However, effective May 1, 1996, the term does not include a supplier, materialman, distributor, or vendor of commercial items or commercial components.
  - (6) Supplies means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.
    - (i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.
    - (ii) Supplies includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.
  - (7) U.S.-flag vessel means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

- (b)
- (1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.
  - (2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if-
    - (i) This contract is a construction contract; or
    - (ii) The supplies being transported are-
      - (A) Noncommercial items; or
      - (B) Commercial items that-
        - (1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

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(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that--

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum--

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information--

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

(1) No ocean transportation was used in the performance of this contract;

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(2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;

(3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY	TOTAL
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(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h) in all subcontracts that exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

[End of Clause]

I-69	252.247-7024	NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA	MAR/2000
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(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor--

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause, including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties

(1) In all subcontracts hereunder, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

[End of Clause]

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SECTION J - LIST OF ATTACHMENTS

List of Addenda	Title	Date	Number of Pages	Transmitted By
Exhibit A	CONTRACT DATA REQUIREMENTS LIST (CDRL) DD 1423			
Exhibit B	INSTRUCTIONS FOR COMPLETING SF 298			

CONTRACT DATA REQUIREMENT LIST

Form Approval OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.:  
B. EXHIBIT : A  
C. CATEGORY.....:  
D. SYSTEM/ITEM.....:  
E. CONTRACT/PR NO.:W56HZV-04-C-0091  
F. CONTRACTOR.....: Kryonyx, Inc.  
1. DATA ITEM NO. ....: A001  
2. TITLE OF DATA ITEM : SCIENTIFIC AND TECHNICAL REPORT  
3. SUBTITLE .....:  
4. AUTHORITY .....: C.2, C.5  
5. CONTRACT REFERENCE: C.2, C.5  
6. REQUIRING OFFICE .: AMSRD-TAR-R / MS 263 9. DIST. STATEMENT REQUIRED: 12. DATE OF FIRST SUB: SEE ITEM 16  
7. DD250 REQ .....: DD 10. FREQUENCY : SEE ITEM 16 13. DATE OF SUBS. SUB: SEE ITEM 16  
8. APP CODE .....: A 11. AS OF DATE:

14. DISTRIBUTION ADDRESSEES: SUBMIT REPORTS ELECTRONICALLY TO THE E-MAIL ADDRESSES SHOWN IMMEDIATELY BELOW:

Gregory Hudas, CONTRACTING OFFICER'S REPRESENTATIVE, E-MAIL: Gregory Hudas, ghudas@tacom.army.mil  
Kathy Lambert, CONTRACT SPECIALIST, E-MAIL: lambertk@tacom.army.mil  
15. TOTAL:

16. REMARKS:

- a. The 1st Interim Technical Report (C.2.1) shall be delivered 2 months after date of contract award
- b. The 2nd Interim Technical Report (C.2.1) shall be delivered 4 months after date of contract award.
- c. The Draft of the Final Technical Report (C.2.2) shall be delivered 5 months and 1 week after date of contract award. The draft report shall include a completed Standard Form (SF) 298 (Report Documentation Page) as the report's cover sheet. The Government will review and respond within 7 days of receipt. The contractor shall submit the Final Technical Report (with the completed SF 298) within 14 days after receipt of draft comments/approval.
- d. Option CLIN 0003 Interim Addendum to the Final Technical Report (C.5.1) shall be delivered 2 months after date of CLIN 0003 Option exercise.
- e. Option CLIN 0003 Final Addendum (C.5.1): The Draft Final Addendum to the Final Technical Report (with a completed SF 298) shall be delivered 3 months and 1 week after the date of the CLIN 0003 Option exercise. The Government will review and respond within 7 days of receipt. The contractor shall submit the final addendum (with the completed SF 298) within 14 days after receipt of draft comments/approval. Note: The Final Addendum shall discuss not only the work accomplished during the Phase I, but also explain how the Option Period effort (CLIN 0003) ties into the Basic Period effort (CLIN 0001) and the planned Phase II effort.
- f. You may download the SF 298 form, from the following internet address:

<http://www.dtic.mil/dtic/forms/sf298template.doc>

Instructions for completing the SF 298 are provided as Attachment 1 to the Contract.

Here are some additional instructions for completing the SF 298 form, that apply when submitting reports under the SBIR Program:

For each unclassified report, the Contractor shall fill in Block 12a (Distribution/Availability Statement) of the SF 298 with one of the following statements:

- (a) Approved for public release; distribution unlimited.

(b) Distribution authorized to U.S. Government Agencies only; contains proprietary information

Note: After reviewing the Contractor's entry in Block 12a, TARDEC has final responsibility for assigning a distribution statement. The contractor shall mark the actual report itself in accordance with the appropriate legends set forth in DFARS 252.227-7018, "RIGHTS IN NONCOMMERCIAL TECHNICAL DATA AND COMPUTER SOFTWARE -- SMALL BUSINESS INNOVATIVE RESEARCH (SBIR) PROGRAM".

Block 13 (Abstract) of the SF 298 must include the first sentence, "Report developed under SBIR contract for topic (insert topic number) ." The abstract must identify the purpose of the work and briefly describe the work carried out, the finding or results, and the potential applications of the effort. Since the Department of Defense (DOD) will be publishing the abstract, it must not contain any proprietary or classified data.

Block 14 (Subject Terms) of the SF 298 must include the term "SBIR Report."

g. Prepare the reports in the Contractor's format. Submit the reports using any of the following electronic formats:

(1) Files readable using these Microsoft\* 97 Office Products (TACOM can currently read OFFICE 97\* and lower): Word, Excel, PowerPoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print image is not acceptable. Executable files are unacceptable.

(2) Files in Adobe PDF (Portable Document Format). Scanners should be set to 200 dots per inch.

(3) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to live Internet sites or pages. All linked information must be contained within your electronic report, and be accessible offline.

(4) Other electronic formats. Before preparing your report in any other electronic format, please e-mail the COR, with an e-mail copy-furnished to amsta-idq@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the COR not later than ten calendar days before the draft report's due date. All alternate methods must be a no cost to the Government.

NOTES: (a) The above formats may be submitted in compressed form using self-extracting files.

(b) Files may be read-only, password protected.

h. Acceptable media: The Contractor shall submit reports via e-mail. If e-mail is not workable, other acceptable media include 100 or 250 Megabyte Zip\*-disk, 3 inch disk, or 650 megabyte CD ROM. Identify the software application and version used to create each file submitted.

(1) E-MAIL. Maximum size of each e-mail message shall be three and one-half (3.5) megabytes. Any compressed files must be self-extracting, and you must provide appropriate instructions. You may use multiple e-mail messages if necessary, however, you must annotate the subject lines in this manner: "Message 1 of 3, 2 of 3, 3 of 3."

(2) 100 or 250 MEGABYTE ZIP\*-DISK, 3 INCH DISK, OR 650 MEGABYTE CD ROM via U.S. Mail or other carrier. The Contractor shall label and all submitted disks with the Contract number, the Contractor's name and address, and a contact's phone number.

NOTE: Please select only one medium by which to transmit each report. For instance, do not submit a report via e-mail and 100 megabyte Zip\*-disk.

\* Registered Trademark

17. PRICE GROUP: 18. ESTIMATED TOTAL PRICE :

INSTRUCTIONS FOR COMPLETING SF 298

1. REPORT DATE. Full publication date, including day, month, if available. Must cite at least the year, e.g. 30-06-1998; xx-06-1998; xx-xx-1998.
2. REPORT TYPE. State the type of report, such as final, technical, interim, memorandum, master's thesis, progress, quarterly, research, special, group study, etc.
3. DATES COVERED. Indicate the time during which the work was performed and the report was written, e.g., Jun 1997 - Jun 1998; 1-10 Jun 1996; May - Nov 1998; Nov 1998.
4. TITLE. Enter title and subtitle with volume number and part number, if applicable. On classified documents, enter the title classification in parentheses.
- 5a. CONTRACT NUMBER. Enter the contract number as it appears in the report, e.g. W56HZV-04-C-0001.
- 5b. GRANT NUMBER. Enter all grant numbers (if applicable) as they appear in the report, e.g. AFOSR-82-1234.
- 5c. PROGRAM ELEMENT NUMBER. Enter all program element numbers (if applicable) as they appear in the report, e.g. 61101A.
- 5d. PROJECT NUMBER. Enter all project numbers (if applicable) as they appear in the report, e.g. 1F665702D1257; ILIR.
- 5e. TASK NUMBER. Enter all task numbers (if applicable) as they appear in the report, e.g. 05; RF0330201; T4112.
- 5f. WORK UNIT NUMBER. Enter all work unit numbers (if applicable) as they appear in the report, e.g. 001; FAPL30480105.
6. AUTHOR(S). Enter name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. The form of entry is the last name, first name, middle initial, and additional qualifiers separated by commas, e.g. Smith, Richard, J, Jr.
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES). Leave Blank
8. PERFORMING ORGANIZATION REPORT NUMBER. Leave Blank
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES). Enter "US Army Tank-automotive & Armaments Command Research Development and Engineering Center, Warren, Michigan 48397-5000".
10. SPONSOR/MONITOR'S ACRONYM(S). Enter "TARDEC".
11. SPONSOR/MONITOR'S REPORT NUMBER(S). Enter report number as assigned by the sponsoring/monitoring agency, if available/known, e.g. BRL-TR-829; -215.
12. DISTRIBUTION/AVAILABILITY STATEMENT. Use agency-mandated availability statements to indicate the public availability or distribution limitations of the report (refer to instructions on the DD Form 1423). If additional limitations/restrictions or special markings are indicated, follow agency authorization procedures, e.g. RD/FRD, PROPIN, ITAR, etc. Include copyright information.
13. SUPPLEMENTARY NOTES. Enter information not included elsewhere such as: prepared in cooperation with; translation of; report supersedes; old edition number, etc.
14. ABSTRACT. A brief (approximately 200 words) factual summary of the most significant information.
15. SUBJECT TERMS. Key words or phrases identifying major concepts in the report.
16. SECURITY CLASSIFICATION. Enter security classification in accordance with security classification regulations, e.g. U, C, S, etc. If this form contains classified information, stamp classification level on the top and bottom of this page.
17. LIMITATION OF ABSTRACT. This block must be completed to assign a distribution limitation to the abstract. Enter UU (Unclassified Unlimited) or SAR (Same as Report). An entry in this block is necessary if the abstract is to be limited.



**PIIN/SIIN** W56HZV-04-C-0091

**MOD/AMD**

**ATT/EXH ID** Exhibit B

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